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## Original Article

# Social media, knowledge translation, and action on the social determinants of health and health equity: A survey of public health practices

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**Abstract** The growth of social media presents opportunities for public health to increase its influence and impact on the social determinants of health and health equity. The National Collaborating Centre for Determinants of Health at St. Francis Xavier University conducted a survey during the first half of 2016 to assess how public health used social media for knowledge translation, relationship building, and specific public health roles to advance health equity. Respondents reported that social media had an important role in public health. Uptake of social media, while relatively high for personal use, was less present in professional settings and varied for different platforms. Over 20 per cent of those surveyed used Twitter or Facebook at least weekly for knowledge exchange. A lesser number used social media for specific health equity action. Opportunities to enhance the use of social media in public health persist. Capacity building and organizational policies that support social media use may help achieve this.

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## Introduction

The digital age has revolutionized the way people and organizations access information, communicate, and collaborate. Social media, defined as Internet-based tools for developing and sharing content, allow for quick and easy dissemination of information to diverse

stakeholders. With billions of people using social media tools around the globe, public health has the potential to increase the depth and breadth of its conversations, engage and build relations in new ways, and improve its impact.

Health organizations use social media as an “effective way to expand their reach, foster engagement, and increase access to credible, science-based health messages”.<sup>1</sup> This creates the opportunity for ongoing dialogue, knowledge exchange,<sup>2</sup> and the integration of social media into public health activities.<sup>3</sup> Public health can use social media to enhance the use of research evidence and knowledge mobilization; inform, educate, and empower people about health issues; assess public perception; increase rapid access to public health messaging during emergency and non-emergency situations; mobilize community partnerships and action; and collect surveillance data.<sup>1,3</sup> Social media allows messages to be audience specific and distributed more widely, and promote the democratization of knowledge and information.<sup>1,4</sup>

In terms of research and knowledge mobilization, social media can facilitate rapid distribution of research, and stimulate conversations on how findings can be used to advance practice and policy.<sup>5,6</sup> In public health organizations that use Twitter for research dissemination, an increase in interaction, followers, and website traffic has been noted.<sup>7</sup> Researchers, however, express reluctance to use social media due to lack of control, difficulty in assessing benefits, and distrust due to lack of formal peer review.<sup>5</sup> Researchers have described social media as incompatible with research, of high risk professionally, of uncertain efficacy, and an unfamiliar technology.<sup>8</sup>

Many public health organizations have established a social media presence, predominantly on Twitter, Facebook, and YouTube.<sup>1,9,10</sup> Social media are being integrated into a range of public health interventions<sup>11,12</sup> and have the capability to facilitate meaningful engagement and support community building and advocacy with target audiences.<sup>13</sup> Public health organizations have, however, a limited reach, as evidenced by relatively low number of followers, page likes, and subscribers. They are using social media in a unidirectional manner instead of realizing fully social media’s interactive potential.<sup>10,14</sup>

In spite of its widespread use by the general public, and its adoption by many public health organizations, there is limited information on how public health practitioners and researchers use social media on issues related to the social determinants of health (SDH) and health



equity. We were particularly interested in how social media are being used for knowledge translation and action to close the gap between those who are most and least healthy.

## Methods

We conducted an online survey in English and French from January 18, 2016 to February 10, 2016 with participants recruited from across Canada and beyond through organizational mailing lists (e.g. National Collaborating Centre for Determinants of Health), Canadian public health associations and equity/SDH focused listservs (e.g. EQUIDAD, SDOH Listserv, Click4HP).

## Findings

A total of 267 participants (Table 1) completed the survey.

### Social media competency: skill, capacity, and attitudes

Before delving into more complex behaviours, respondents were asked to assess their comfort level online. Most respondents (79.8 per cent) rated their comfort level with online tools or participating in a web-based environment as 7–10, with a mean rating of 7.6. Twenty-five per cent reported a 10/10 comfort level. Over half of respondents (57 per cent) spent up to 5 h per week on social media. Approximately one in ten spent 5–15 h per week on social media, while about one-third spent no time on social media.

### Social media competencies

To take full advantage of social media, one must have the requisite knowledge and skills. To gauge skill level, respondents rated themselves on a range of competencies. Most respondents “agreed” or “strongly agreed” that they understood the general principles of social media (90 per cent); could list major tools, categories, and uses of social networking (79 per cent); were able to follow ‘netiquette’, conform to ethical standards, and interact appropriately with others online (77 per cent). Two-thirds of respondents were able to navigate content related to the SDH and health equity and 57 per cent were able to evaluate this

**Table 1:** Demographic profile of respondents

Gender	Female: 81.8 %, male: 15.9 %, trans man: 0.4 % Gender queer/nonconforming: 0.4 %, not sure: 0.4 %
Language at work	English: 92.4 %, French: 1.1 %, other: 6.5 %
Education	College diploma: 4.2 % MD (Medical Doctor): 5.7 % Bachelors: 24 % Doctorate: 14.5 % Masters degree: 47.7 % Other: 3.8 %
Location	Canada: 89.4 %, international: 10.6 %
Setting	Urban: 56 %, rural: 14 %, mixed rural and urban: 25 %
Age	20–30 years: 13.0 % 51–60 years: 25.6 % 31–40 years: 26.3 % Over 60 years: 8.8 % 41–50 years: 26.3 %
Organization type <sup>a</sup>	Public health organization: 54.9 % Academic institution: 17.8 % Non-governmental organization: 11.7 % Other: 29.5 %
Years in public health	Less than 1: 3.0 % 1–5: 25.9 % 6–10: 25.1 % 11–15: 17.1 % 16–20: 8.7 % 21–25: 5.7 % More than 25: 13.3 % N/A: 1.1 %
Time spent on the SDH/health equity	Range: 0–100 % Mean: 54 % One in ten spent 100 % of their time on the SDH and health equity

<sup>a</sup>Does not equal 100 per cent multiple responses allowed.

content. Just over half of respondents (54 per cent) were able to create SDH and health equity content. About one in two (48 per cent) were satisfied about their ability to use social media to support action on the SDH and health equity.

## Attitudes

Attitudes towards social media as a tool for taking action on the SDH and health equity can influence uptake and use. Over 85 per cent of respondents felt social media had a place in public health and was a valuable tool for: disseminating health information to the public; engaging the public in public health issues; and supporting action on the SDH and health equity. Three quarters of respondents felt that social media support public health to fulfil its mandate, while 13 per cent felt social media took away from other priorities.



## Relationship building

Trust can influence one's ability to engage with others freely and is a key contributor to knowledge sharing.<sup>15</sup> Most respondents indicated that on social media, trust (83 per cent); honesty and transparency (74 per cent), and knowing who was participating (72 per cent) were important in online interactions. Social media enabled respondents to increase the number of people with whom they were connected (68 per cent), and helped strengthen existing relationships (52 per cent).

In all, respondents engaged with a range of people within and outside of public health including: the general public (71 per cent); public health practitioners (62 per cent); researchers (50 per cent); media (43.2 per cent); policy/decision-makers (39.9 per cent); and, elected officials/politicians (33.7 per cent).

## Social media use and behaviour

Respondents accessed digital platforms for providing information related to the SDH and health equity. Social media (58 per cent) was second only to websites (68 per cent) for daily or weekly use. The top three online information sources were: Canada's National Collaborating Centre for Determinants of Health, the World Health Organization, and Twitter/the Public Health Agency of Canada (tied).

### *Motivation for online engagement*

The vast majority of respondents rated engaging with other public health professionals to learn about current evidence and research (91 per cent) and practices (88 per cent) as "important" or "very important." Approximately three quarters of respondents indicated that online engagement afforded opportunities for networking and relationship building, and 69 per cent for collaboration with others. Over half were motivated by the chance to share their work on the SDH and health equity (57 per cent), or request input and advice (54 per cent) (Table 2).

### *Personal and professional social media use*

Our survey explored use of social media for professional purposes. We assessed personal use as a point of comparison and an indication of participants' familiarity with the specific platforms.

**Table 2:** Motivation for online engagement with other public health professionals

	<i>Very important (%)</i>	<i>Important (%)</i>	<i>Somewhat important (%)</i>	<i>Not important (%)</i>	<i>N/A (%)</i>	<i>Total</i>
Learn about current practices	52.5	35.4	9.5	1.9	0.8	263
Learn about current evidence and research	61.6	28.9	6.5	1.5	1.5	263
Request input and advice	21.8	31.7	34.0	8.8	3.80	262
Share your work on the SDH and health equity	22.4	34.2	25.9	9.5	8.0	263
Opportunities for collaboration with others	32.8	36.3	24.8	3.4	2.7	262
Networking and relationship building	39.7	34.7	20.6	2.7	2.3	262

On a daily or weekly basis, Facebook and YouTube were used most frequently (76 and 61 per cent, respectively) for personal use compared with Twitter, LinkedIn, Instagram, and Pinterest (45, 29, 25, and 23 per cent, respectively). In professional contexts, Twitter and Facebook were used most frequently on a daily or weekly basis (40 and 35 per cent, respectively), followed by LinkedIn (24 per cent) and YouTube (22 per cent). Approximately one in four respondents accessed Twitter on a daily basis. Pinterest and Instagram were accessed least ( $\leq 5$  per cent).

Facebook experienced the most dramatic drop in daily usage between personal and professional purposes (from 66 to 17 per cent); with 41 per cent of respondents reporting that they never used it for professional purposes. On the other hand, daily Twitter use did not drop as much (26.7 vs 24.8 per cent).

### *Knowledge exchange*

Social media use for knowledge exchange varied. Just over a quarter (27.6 per cent) used Twitter, and 21 per cent used Facebook on a daily or weekly basis followed by LinkedIn and YouTube (11.5 and 6.8 per cent, respectively). Pinterest and Instagram were rarely used ( $< 3$  per cent).

### *Action on the SDH and health equity*

Approximately one-third of respondents used Facebook and Twitter on at least a weekly basis, whereas a little over one in ten used YouTube and LinkedIn to support action on the SDH and health equity

**Table 3:** Social media and action on the SDH and health equity

	<i>Daily</i> (%)	<i>Weekly</i> (%)	<i>Monthly</i> (%)	<i>Infrequently</i> (%)	<i>Never</i> (%)	<i>Total</i>
Facebook	8.7	13.4	11.8	22.4	43.7	254
Twitter	8.7	12.6	9.5	19.4	49.8	253
YouTube	0.4	5.5	6.3	27.7	60.1	253
LinkedIn	2.0	3.6	6.7	16.3	71.4	252
Pinterest	0.0	0.0	1.2	5.6	93.2	250
Instagram	0.0	0.8	2.4	6.7	90.1	253

(Table 3). Pinterest and Instagram were almost never used. Social media were integrated in public health roles to advance health equity<sup>16</sup> by 8–20 per cent of respondents on a daily or weekly basis (Table 4).

### Organizational policies

Organizational policies were examined as a critical factor that promotes the use of digital technologies. Approximately 70 per cent of respondents were able to spend time interacting online for professional purposes as part of their workday. Almost 60 per cent of organizations were reportedly “supportive” or “very supportive” of the use of digital technologies. Half of respondents, however, noted the presence of organizational barriers such as blocked social media and websites; restrictive security and privacy policies; limited direct access; complex approval processes, and technological barriers.

Over a third of respondents reported that organizational policies and strategies designated which audience(s) they were trying to reach and 29 per cent included which goals and objectives were most appropriate. A quarter of respondents reported that these policies outlined how their audience used social media, as well as which social media applications fit best with their goals and objectives.

### Discussion

Public health professionals understood the general principles of social media. Many felt competent using them and affirmed their value in public health. Most respondents felt comfortable online and social media use was a regular part of their workweek. Nonetheless, half of respondents were not satisfied with their ability to use social media to

**Table 4:** Social media and actions on the SDH and health equity

	<i>Daily (%)</i>	<i>Weekly (%)</i>	<i>Monthly (%)</i>	<i>Infrequently (%)</i>	<i>Never (%)</i>	<i>Total</i>
Assess and report on the existence and impact of health inequities	6.9	13.7	16.5	29.0	33.9	248
Assess and report on effective strategies to reduce health inequities	6.0	12.0	20.1	29.3	32.5	249
Modify and orient interventions and services to reduce inequities	2.4	8.9	13.7	35.1	39.9	248
Participate in policy analysis and development, and in advocacy to improve the social determinants of health and inequities	3.2	5.2	15.3	34.3	41.9	248
Partner with other government and community organizations to identify ways to improve health equity	1.6	7.3	15.0	32.8	43.3	247

support action on the SDH and health equity. This signals an opportunity within public health to increase personal and professional satisfaction through skill and practice development. Areas for improvement include navigating, and creating and evaluating content to support action on the SDH and health equity.

Access to research and access to practice evidence were strong motivators for online engagement, pointing to the important role social media can play in knowledge translation. Our findings demonstrate the potential of social media to create and maintain relationships, as well as to reach, and engage diverse audiences and engender collaboration. As previously noted,<sup>13,15</sup> trust was an important factor in knowledge sharing and relationship building. As social media use proliferates, public health will need to consider how knowledge translation strategies are affected by the nuances of personal and professional social media practices.

Social media were second only to websites as a source of information on the SDH and health equity. Its use is likely to increase. While many organizations support social media use, practices such as blocked sites and ambiguous or slow organizational approvals may inadvertently restrict access and use. Investing in clear enabling policies will allow





organizations to expand their reach, and foster interactions and engagement.<sup>8,10</sup> Moving forward to adopt and evaluate social media will need to be faster and more flexible than is currently the case.

## Conclusion

We assessed how social media was being used to support action on the SDH and health equity. The findings suggest that public health professionals are generally knowledgeable about social media and think it adds value to public health practice. Public health is using social media for knowledge translation, relationship building, and specific public health roles to advance health equity. Use was higher for more passive forms for engagement, and there is potential to increase the types and levels of engagement. Additionally, there is variation in personal and professional use, which organizations need to take into account when planning social media activities and developing enabling policies. There are opportunities for increased use of social media to support action on the SDH and on health equity, as well as to evaluate the value and impact of the use.

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